

FEB 20 2001

PATENT & TRADEMARK OFFICE

INFORMATION DISCLOSURE
CITATION

PTO-1449

ATTY. DOCKET NO.
A-67851-2/DJB/RMS/DCFSERIAL NO.
09/513,362APPLICANT
CHEE et al.FILING DATE
February 25, 2000GROUP
~~1643~~ 1656

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
TS ✓	1	4,822,746	4/1989	Walt	—	—	
✓	2	5,002,867	3/1991	Macevicz	—	—	
✓	3	5,114,864	5/1992	Walt	—	—	
✓	4	5,105,305	4/1992	Betzig et al.	—	—	
✓	5	5,143,853	9/1992	Walt	—	—	
✓	6	5,028,545	7/1991	Soini	—	—	
✓	7	5,244,636	9/1993	Walt et al.	—	—	
✓	8	5,244,813	9/1993	Walt et al.	—	—	
✓	9	5,250,264	10/1993	Walt et al.	—	—	
✓	10	5,252,494	10/1993	Walt	—	—	
✓	11	5,254,477	10/1993	Walt	—	—	
✓	12	5,298,741	3/1994	Walt et al.	—	—	
✓	13	5,320,814	6/1994	Walt et al.	—	—	
✓	14	5,496,997	3/1996	Pope	—	—	
✓	15	5,512,490	4/1996	Walt et al.	—	—	
✓	16	5,573,909	11/1996	Singer et al.	—	—	
✓	17	5,633,972	5/1997	Walt et al.	—	—	
✓	18	4,499,052	2/1985	Fulwyler	—	—	
✓	19	5,690,894	11/1997	Pinkel et al.	—	—	
✓	20	5,194,300	3/1993	Cheung	—	—	
TS ✓	21	5,132,242	7/1992	Cheung	—	—	

EXAMINER

Teresa Stuebelia

DATE CONSIDERED

08/30/01

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FEB 20 2001

SHEET 2 OF 5

INFORMATION DISCLOSURE CITATION

PTO-1449

 ATTY. DOCKET NO.
A-67851-2/DJB/RMS/DCF

 SERIAL NO.
09/513,362

 APPLICANT
CHEE et al.

 FILING DATE
February 25, 2000

 GROUP
~~1643~~ 1656

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
TS ✓	22	4,200,110	4/1980	Peterson et al.			
✓	23	4,824,789	4/1989	Yafuso et al.			
✓	24	4,682,895	7/1987	Costello			
✓	25	4,785,814	11/1988	Kane			
✓	26	5,518,883	5/1996	Soini			
✓	27	4,999,306	3/1991	Yafuso et al.			
✓	28	5,302,509	4/1994	Cheeseman			
✓	29	5,357,590	10/1994	Auracher			
✓	30	5,435,724	7/1995	Goodman et al.			
✓	31	5,481,629	1/1996	Tabuchi			
✓	32	5,575,849	11/1996	Honda et al.			
✓	33	5,639,603	6/1997	Dower et al.			
✓	34	5,656,241	8/1997	Seifert et al.			
✓	35	5,814,524	10/1998	Walt			
✓	36	5,863,708	1/1999	Zanzucchi et al.			
TS ✓	37	6,023,540	2/2000	Walt et al.			

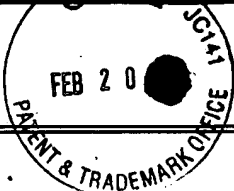
EXAMINER

Teresa Stnelechia

DATE CONSIDERED

08/30/01

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE
CITATION

PTO-1449

ATTY. DOCKET NO.
A-67851-2/DJB/RMS/DCFSERIAL NO.
09/513,362APPLICANT
CHEE et al.FILING DATE
February 25, 2000GROUP
~~1643~~ 1656

U.S. PATENT DOCUMENTS

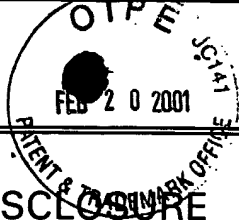
EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
TS ✓	38	5,494,798	2/1996	Gerdt et al.	_____	_____	
✓	39	5,565,324	10/1996	Still et al.	_____	_____	
✓	40	5,516,635	5/1996	Ekins et al.	_____	_____	
✓	41	5,900,481	5/1999	Lough et al.	_____	_____	
✓	42	5,888,723	3/1999	Sutton et al.	_____	_____	
✓	43	5,380,489	1/1995	Sutton et al.	_____	_____	
✓	44	5,840,256	11/1998	Demers et al.	_____	_____	
TS ✓	45	5,854,684	12/1998	Stabile et al.	_____	_____	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							Yes	No
TS ✓	46	0 478 319	4/1992	EP	_____	_____		
✓	47	0 269 764	6/1988	EP	_____	_____		
✓	48	93/02360	2/1993	PCT	_____	_____		
✓	49	89/11101	11/1989	PCT	_____	_____		
✓	50	97/14028	4/1997	PCT	_____	_____		
✓	51	0 723 146	7/1996	EP	_____	_____		
✓	52	98/40726	9/1998	PCT	_____	_____		
✓	53	0 392 546	10/1990	EP	_____	_____		
✓	54	98/53093	11/1998	PCT	_____	_____		
✓	55	97/40385	10/1997	PCT	_____	_____		
✓	56	98/53300	11/1998	PCT	_____	_____		
✓	57	96/03212	2/1996	PCT	_____	_____		
TS ✓	58	99/60170	11/1999	PCT	_____	_____		

EXAMINER *Teresa Stnelechia*DATE CONSIDERED *08/30/01*

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE
CITATION

PTO-1449

ATTY. DOCKET NO.
A-67851-2/DJB/RMS/DCFSERIAL NO.
09/513,362APPLICANT
CHEE et al.FILING DATE
February 25, 2000GROUP
~~1643~~ 1656

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
TS ✓	59	97/14928	4/1997	PCT			
✓	60	98/50782	11/1998	PCT			
✓	61	99/18434	4/1999	PCT			
✓	62	00/04372	1/2000	PCT			
TS ✓	63	99/67414	12/1999	PCT			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

TS ✓	64	Ferguson et al., "A Fiber-Optic DNA Biosensor Microarray for the Analysis of Gene Expression," Nature Biotechnology, 14:1681-1684 (1996).
✓	65	Healey et al., "Improved Fiber-Optic Chemical Sensor for Penicillin," Anal. Chem. 67(24):4471-4476 (1995).
✓	66	Healey et al., "Development of a Penicillin Biosensor Using a Single Optical Imaging Fiber," SPIE Proc. 2388:568-573 (1995).
✓	67	Michael et al., "Making Sensors out of Disarray: Optical Sensor Microarrays," Proc. SPIE, 3270: 34-41 (1998).
✓	68	Michael et al., "Randomly Ordered Addressable High-Density Optical Sensor Arrays," Anal. Chem. 70(7): 1242-1248 (April 1998).
✓	69	Michael et al., "Fabrication of Micro- and Nanostructures Using Optical Imaging Fibers and there Use as Chemical Sensors," Proc. 3rd Intl. Symp., Microstructures and Microfabricated Systems, ed. P.J. Hesketh, et al., v. 97-5, Electrochem. Soc., 152-157 (Aug. 1997).
✓	70	Pantano et al., "Ordered Nanowell Arrays," Chem. Mater., 8(12): 2832-2835 (1996).
✓	71	Walt, "Fiber-Optic Sensors for Continuous Clinical Monitoring," Proc. IEEE, 80(6): 903-911 (1992).
✓	72	Anonymous, "Fluorescent Microspheres," Tech. Note 19, Bangs Laboratories, (Fishers, In) February 1997.
✓	73	Anonymous, "Microsphere Selection Guide," Bangs Laboratories, (Fisher, In) September 1998.
✓	74	Bangs, L.B., "Immunological Applications of Microspheres," The Latex Course, Bangs Laboratories (Carmel, IN) April 1996.
✓	75	Peterson, J. et al., "Fiber Optic pH Probe for Physiological Use," Anal. Chem., 52:864-869 (1980).
TS		

EXAMINER

Teresa Stuebelia

DATE CONSIDERED

08/30/01

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

8085 1449A.FRM (8/95)

INFORMATION DISCLOSURE
CITATION

PTO-1449

ATTY. DOCKET NO.
A-67851-2/DJB/RMS/DCFSERIAL NO.
09/513,362APPLICANT
CHEE et al.FILING DATE
February 25, 2000GROUP
~~1643~~ 1656

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

TS ✓	76	Pope, E. "Fiber Optic Chemical Microsensors Employing Optically Active Silica Microspheres," SPIE, 2388:245-256 (1995).
✓	77	Strachan et al., "A Rapid General Method for the Identification of PCR Products Using a Fibre-Optic Biosensor and its Application to the Detection of Listeria," Letters in Applied Microbiology, 21:5-9 (1995).
✓	78	Abel et al., "Fiber-Optic Evanescent Wave Biosensor for the Detection of Oligonucleotides," Anal. Chem. 68:2905-2912 (1996).
✓	79	Piunno et al., "Fiber-Optic DNA Sensor for Fluorometric Nucleic Acid Determination," Anal. Chem., 67:2635-2643 (1995).
✓	80	Drmanac, R. et al., "Sequencing by Oligonucleotide Hybridization: A Promising Framework in Decoding of the Genome Program," The First International Conference on Electrophoresis, Supercomputing and the Human Genome, Proceeding of the April 10-13, 1990 Conference at Florida State University. Ed. C. Cantor and H. Lim.
✓	81	Drmanac, R. et al., "Prospects for a Miniaturized, Simplified and Frugal Human Genome Project," Scientia Yugoslavica, 16(1-2):97-107 (1990).
✓	82	Drmanac, R. et al., "Sequencing by Hybridization (SBH) with Oligonucleotide Probes as an Integral Approach for the Analysis of Complex Genomes," International Journal of Genome Research, 1(1):59-79 (1992).
✓	83	Drmanac, R. et al., "Sequencing by Hybridization," Automated DNA Sequencing and Analysis, ed. M. Adams, C. Fields and J. Venter. (1994).
✓	84	Barnard et al., "A Fibre-Optic Chemical Sensor with Discrete Sensing Sites," Nature, 353:338-340 (September 1991).
✓	85	Fuh et al., "Single Fibre Optic Fluorescence pH Probe," Analyst, 112:1159-1163 (1987).
✓	86	Magnani et al., "In-Vivo Biomedical Monitoring by Fiber-Optic Systems," Journal of Lightwave Technology, 13(7):1396-1406 (1995).
✓	87	Healey et al., "Fiberoptic DNA Sensor Array Capable of Detecting Point Mutations," Analytical Biochemistry, 251:270-279 (1997).
✓	88	Hirschfeld et al., "Laser-Fiber-Optic 'Optrode' for Real Time In Vivo Blood Carbon Dioxide Level Monitoring," Journal of Lightwave Technology, LT-5(7):1027-1033 (1987).
✓	89	Peterson et al., "Fiber-Optic Sensors for Biomedical Applications," Science, 13:123-127 (1984).
✓	90	Czarnik, "Illuminating the SNP genomic code," Modern Drug Discovery, 1(2):49-55 (1998).
✓	91	Walt, "Fiber Optic Imaging Sensors," Acc. Chem. Res. 31(5):267-278 (1998).
✓	92	Chen et al., "A Microsphere-Based Assay for Multiplexed Single Nucleotide Polymorphism Analysis Using Single Base Chain Extension," Genome Research, 10(4):549-557 (2000).
TS ✓	93	Iannone et al., "Multiplexed Single Nucleotide Polymorphism Genotyping by Oligonucleotide Ligation and Flow Cytometry," Cytometry, 39:131-140 (2000).

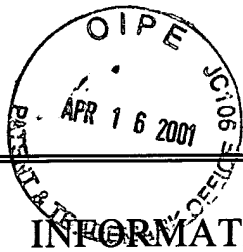
EXAMINER

Teresa Strzelecka

DATE CONSIDERED

08/30/01

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



9

SHEET 1 OF 1

INFORMATION DISCLOSURE
CITATION

PTO-1449

ATTY. DOCKET NO.
A-67851-2/DJB/RMS/DCFSERIAL NO.
09/513,362APPLICANT
Chee et al.FILING DATE
February 25, 2000GROUP
1643-1656

RECEIVED

APR 18 2001

TECH. CENTER 1600/2900

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
TS	1	5,474,895	12/1995	Ishii et al.	—	—	
TS	2	5,679,524	10/1997	Nikiforov et al.	—	—	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							Yes	No
TS	3	99/67641	12/1999	WO	—	—		
	4	00/39587	7/2000	WO	—	—		
	5	00/47996	8/2000	WO	—	—		
	6	00/63437	10/2000	WO	—	—		
	7	00/71243	11/2000	WO	—	—		
	8	00/71995	11/2000	WO	—	—		
TS	9	00/75373	12/2000	WO	—	—		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

TS	10	Shoemaker et al., "Quantitative phenotypic analysis of yeast deletion mutants using a highly parallel molecular bar-coding strategy," Nature Genetics, 14:450-456 (1996).					
TS	11	Lyamichev et al., "Polymorphism identification and quantitative detection of genomic DNA by invasive cleavage of oligonucleotide probes," Nature Biotechnology, 17:292-296 (1999).					

EXAMINER Teresa Stnelechia

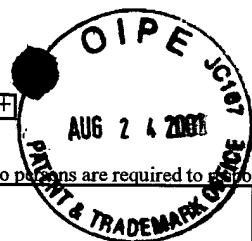
DATE CONSIDERED 8/30/01

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

8085 1449A.FRM (8/95)

1047995

Please type a plus sign (+) inside this box → ☐



PTO/SB/8A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	09/513,362
Filing Date	February 25, 2000
First Named Inventor	Chee et al.
Group Art Unit	1656
Examiner Name	STRZELECKA
Attorney Docket Number	A-67851-2/DJB/RMS/DCF

RECEIVED
AUG 29 2001
TECH CENTER 1600/2500

Sheet 1 of 1

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
TS —	1	5,830,711		Barany et al.	11/1998	
—	2	5,856,083		Chelsky et al.	01/1999	
—	3	5,858,732		Solomon et al.	01/1999	
—	4	6,013,456		Akhavan-Tafti	01/2000	
—	5	6,027,889		Barany et al.	02/2000	
—	6	6,054,564		Barany et al.	04/2000	
—	7	6,110,678		Weisburg et al.	08/2000	
—	8	6,172,218	B1	Brenner	01/2001	
—	9	6,251,639	B1	Kurn	06/2001	
—	10	6,268,148		Barany et al.	07/2001	
—	11	5,854,033		Lizardi	12/1998	
—	12	5,554,516		Kacian et al.	09/1996	
—	13	5,541,311		Dahlberg et al.	07/1996	
TS —	14	5,660,988		Duck et al.	08/1997	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ² (if known)				
TS —	15	WO	93/25563	A1	City of Hope	12/1993		
—	16	WO	97/31256	A3	Cornell Research Foundation	08/1997		
—	17	WO	00/58516	A2	Whitehead Institute for Biomedical Research	10/2000		
—	18	WO	00/13004	A3	Trustees of Tufts College	03/2000		
—	19	WO	00/16101	A2	Trustees of Tufts College	03/2000		
TS —	20	WO	00/48000	A1	Illumina Inc.	09/2000		

Examiner Signature	Teresa Strzelecka	Date Considered	09/05/01
--------------------	-------------------	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.